SONY

Editing Control Unit

# BVE-700

## Operation Manual

**1st Edition (Revised 1)** English

## WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

**THIS APPARATUS MUST BE EARTHED.**

**For the customers in the USA**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** THIS WARNING IS APPLICABLE FOR USA ONLY.

If used in USA, use the UL LISTED power cord specified below.
DO NOT USE ANY OTHER POWER CORD.

| | |
|---|---|
| Plug Cap | Parallel blade with ground pin (NEMA 5-15P Configuration) |
| Cord | Type SJT, three 16 or 18 AWG wires |
| Length | Less than 2.5 m (8 ft 3 in) |
| Rating | Minimum 10 A, 125 V |

Using this unit at a voltage other than 120V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

## AVERTISSEMENT

Afin d'éviter tout risque d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

Afin d'écarter tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

CET APPAREIL DOIT ÊTRE RELIÉ À LA TERRE.

## VORSICHT

Um Feuergefahr und die Gefahr eines elektrischen Schlages zu vermeiden, darf das Gerät weder Regen noch Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur qualifiziertem Fachpersonal.

DIESES GERÄT MUSS GEERDET WERDEN.

**For the customers in Europe**

This product with the CE marking complies with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.
Compliance with these directives implies conformity to the following European standards:

- EN60950: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment(s): E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).

**Pour les clients européens**

Ce produit portant la marque CE est conforme à la fois à la Directive sur la compatibilité électromagnétique (EMC) (89/336/CEE) et à la Directive sur les basses tensions (73/23/CEE) émises par la Commission de la Communauté européenne.
La conformité à ces directives implique la conformité aux normes européennes suivantes:

- EN60950: Sécurité des produits
- EN55103-1: Interférences électromagnétiques (émission)
- EN55103-2: Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants:
E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé ex. studio de télévision).

**Für Kunden in Europa**

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt sowohl die EMV-Direktive (89/336/EEC) als auch die Direktive Niederspannung (73/23/EEC) der EG-Kommission.
Die Erfüllung dieser Direktiven bedeutet Konformität für die folgenden Europäischen Normen:

- EN60950: Produktsicherheit
- EN55103-1: Elektromagnetische Interferenz (Emission)
- EN55103-2: Elektromagnetische Empfindlichkeit (Immunität)

Dieses Produkt ist für den Einsatz unter folgenden elektromagnetischen Bedingungen ausgelegt:
E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtbereich im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio)

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# Table of Contents

**Overview** ..... **2**
Features of the BVE-700 ..... 2
Features of the BKE-701 HD Switcher Board (Option) ..... 3
System Configuration ..... 4
**Names and Functions of Parts—Processor Unit** ..... **9**
Front Panel ..... 9
Rear Panel ..... 10
**Connections** ..... **15**
Basic System ..... 15
A/B-Roll Editing System ..... 16
**Specifications** ..... **17**

# Overview

The BVE-700 Editing Control Unit is a video editor that enables advanced editing through simple operations.
The BVE-700 is comprised of a control panel and a processor unit. The control panel has operation buttons arranged according to function, making it easy to use even for operators who are new to video editing.
The optional BKE-701 HD Switcher Board can be installed in the processor unit to enable advanced effects such as wipes and dissolves.

## Features of the BVE-700

### Control of up to four VTRs

The BVE-700 enables remote control of up to three player VTRs and one recorder VTR. VTRs to be controlled can be selected simply by pressing buttons on the control panel.

### Numeric keypad and scratchpad

The numeric keypad facilitates rapid entry of edit points, durations, wipe pattern numbers, etc. Data entered with the numeric keypad is displayed on the scratchpad, allowing you to modify the data while viewing the scratchpad.

### Pre-read editing

A/B-roll editing can be conducted using only two VTRs: one player VTR and a recorder VTR with a pre-read function.

### EDL editing

EDLs (Edit Decision Lists) created on this unit can contain up to 100 edits. The unit is equipped with an EDL export port, allowing EDL data (BVE-9100 EDL format) to be imported from and exported to external devices.

### Two search dials

The unit is equipped with two search dials. The search dials enable simultaneous control of two VTRs, for quick location of edit points.

### Three time counter display panels

The unit is equipped with three time counter display panels: one for the recorder and two for player VTRs. This allows you to check time data for up to three VTRs in a single glance.

### Split editing

Video and audio IN points can be set at different points. Either the video IN point or the audio IN point can be selected as the reference point.

### Dynamic Motion Control (DMC)

VTRs that support Dynamic Tracking® (DT) can be used for DMC playback, in which playback speed can be varied freely across the DT playback range. DMC playback speeds can be registered to allow playback at the registered speed during editing.

### Control of external video switcher

In addition to the ability to install the optional BKE-701 HD Switcher Board, the unit features an interface to allow control of an external video switcher such as the DFS-700/700P.

### Control of external audio mixer

The unit features an interface to allow control of an external audio mixer. This allows audio signals to be edited along with video signals.

### Control of external devices by GPI pulses

Start pulses can be sent over the GPI interface to external devices such as telop cameras or telecine systems.

### Setup menu

The setup menu allows easy configuration of the BVE-700 system for your environment and intended applications.

## Features of the BKE-701 HD Switcher Board (Option)

The optional BKE-701 HD Switcher Board can be installed in the processor unit to provide the following functions.

### A/B-roll editing

In addition to cut editing, the BKE-701 enables A/B-roll editing of the playback signals of two player VTRs.

### Support for rich variety of video signals

In addition to VTR playback signals, support is provided for video output signals of cameras and other devices, and for color background or color bar signals generated by the internal background signal generator. The hue, saturation, and luminance of color background signals can be adjusted.

### Dissolve and wipe effects

The BKE-701 allows effects such as wipes and dissolves to be used in the transitions between scenes.

Wipe patterns can be specified by pressing a wipe selection button, or by entering a wipe pattern number from the numeric keypad. Wipe directions can be reversed, pattern edges can be softened, and borders can be added to the pattern.

### Title insertion

The title function allows titles and telop images to be superimposed over the video.

### Status displays

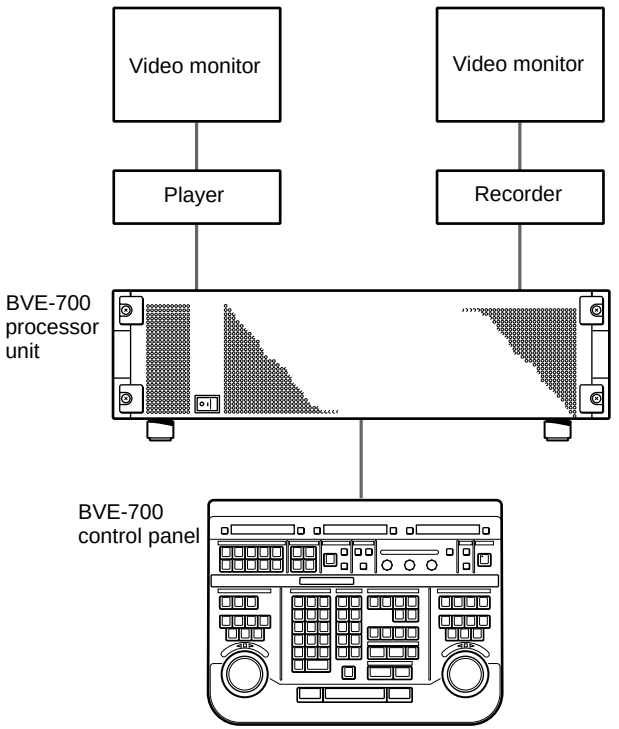
When the 59.94-Hz video format is used, VTR time data such as the current tape position and edit point timecode can be displayed on the video monitor used as the main monitor. In setup mode, setup menu items are displayed.

# System Configuration

This section describes the configuration of some editing systems using the BVE-700.

## Basic system

The figure below shows a basic editing system using the BVE-700. This system has one player and one recorder, and allows cut editing in assemble and insert modes.



## A/B-roll editing system

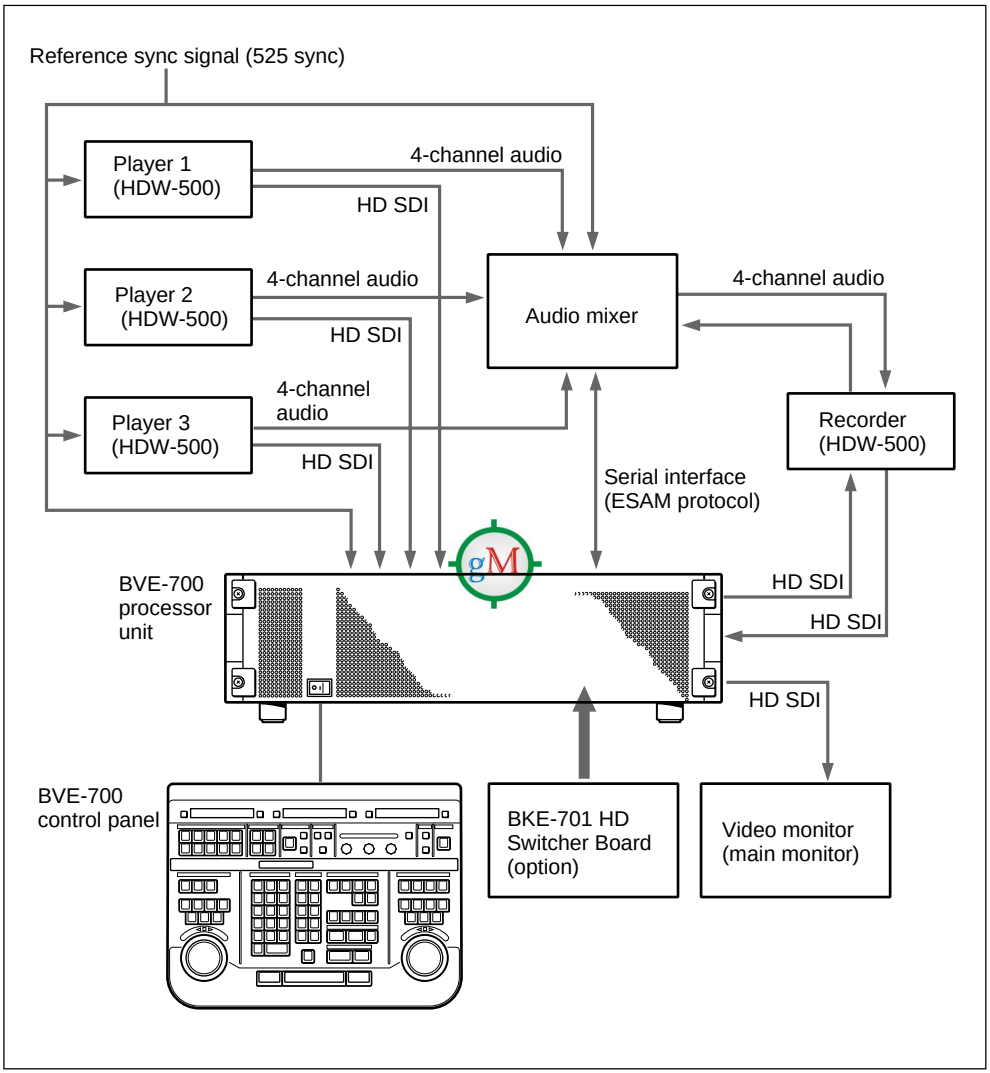
When the optional BKE-701 HD Switcher Board is installed in the BVE-700 processor unit, HD VTRs can be used to configure an A/B-roll editing system. Effects such as wipes and dissolves can be used to switch between the video of bus A and bus B.
In a system with three players, two players are selected for use in the edit.

**Note**

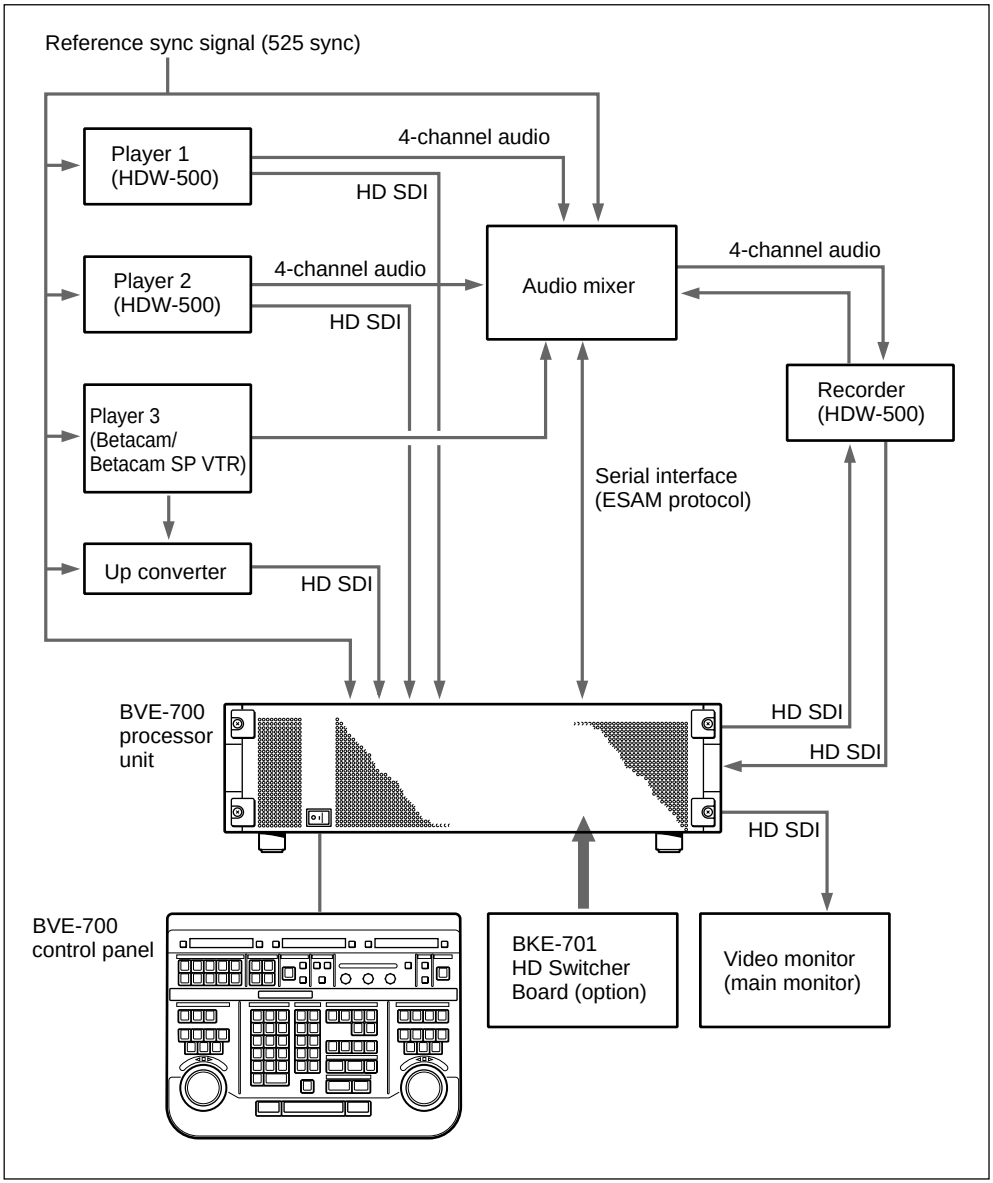
To control a VTR connected to the AUX/PLAYER-3 connector in the SDI INPUT section of the processor unit as player 3, the “AUX | P3” item in the setup menu (SET UP DATA > SYSTEM CONFIG) must be set to P3.

This section describes the configuration of two A/B-roll editing systems, one which uses only HD VTRs, and one which uses HD VTRs together with a Betacam/Betacam SP VTR.

## A/B-roll editing system

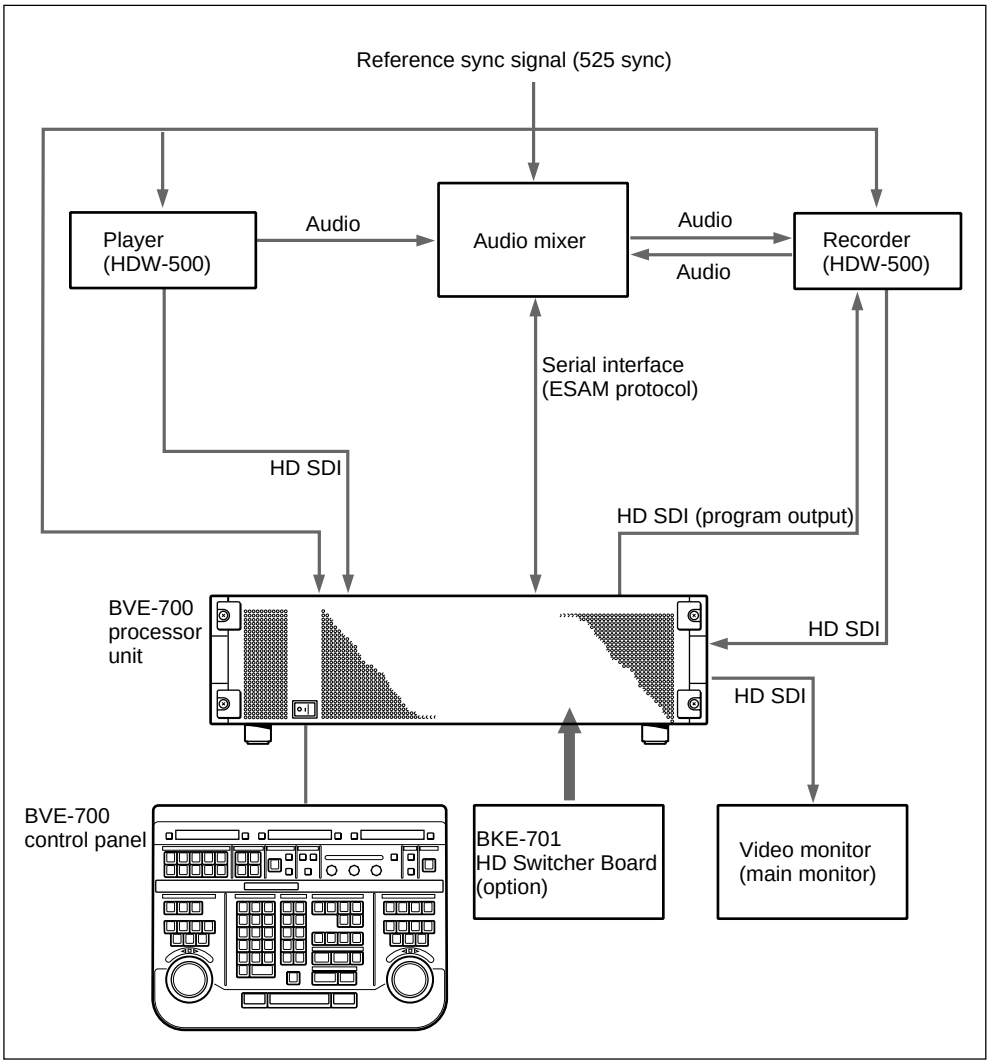


## A/B-roll editing system using HD VTRs and a Betacam/Betacam SP VTR



## Pre-read editing system

When using a VTR with a pre-read function as the recorder, an A/B-roll editing system can be configured with one player and one recorder.

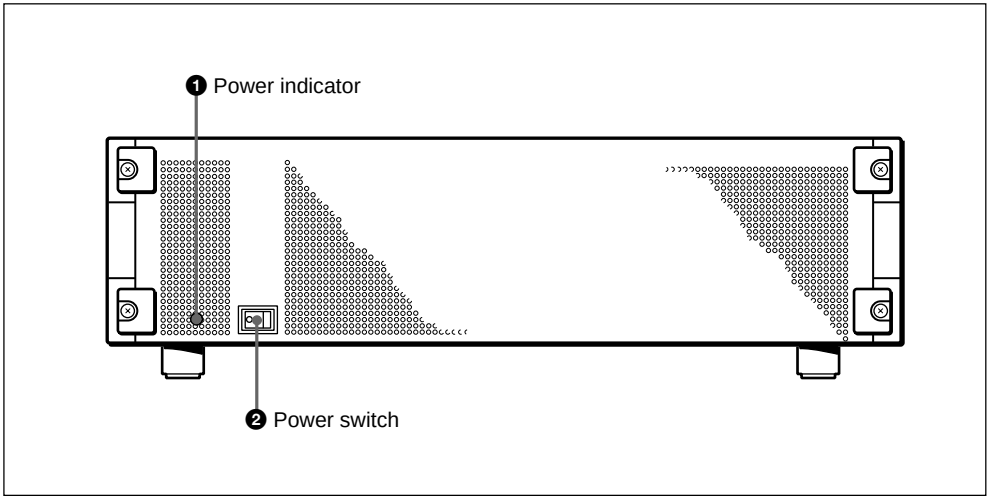


# Names and Functions of Parts —Processor Unit

This section explains the names and functions of the parts of the processor unit.

*Refer to the User's Guide for the names and functions of the parts of the control panel.*

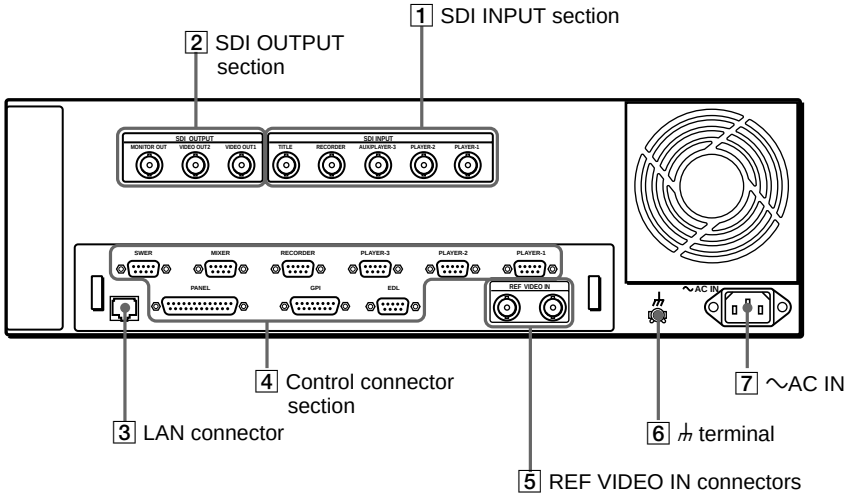
## Front Panel



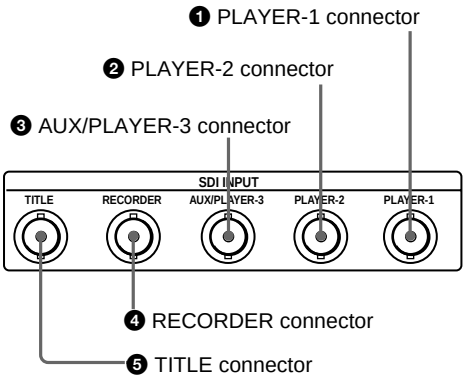

**❶ Power indicator**
Lights green when the processor unit is powered on.

**❷ Power switch**
Powers the processor unit on and off. To power the processor unit on, press the "I" side of the switch. The control panel is powered on automatically whenever the processor unit is powered on.

## Rear Panel




## 1 SDI INPUT section



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The connectors in this section input SDI (Serial Digital Interface) format signals from external devices. To use these connectors, the optional BKE-701 HD Switcher Board must be installed.

**❶ PLAYER 1 connector (BNC type)**
Inputs video signals for use in editing. Connect to the SDI output connector of the VTR to be used as player 1.

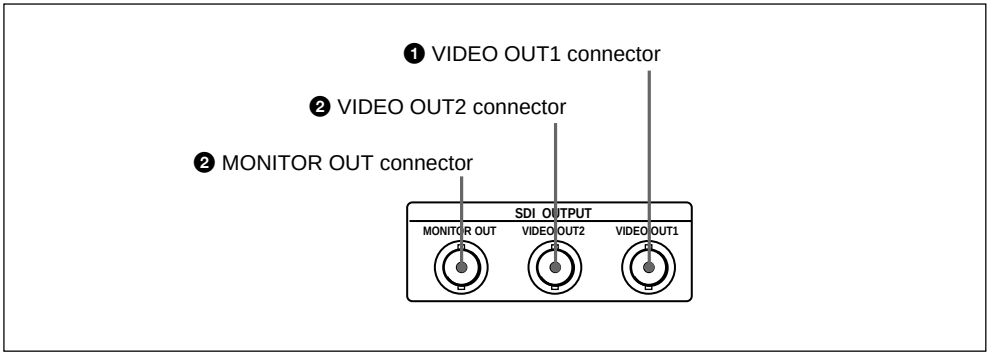
**❷ PLAYER-2 connector (BNC type)**
Inputs video signals for use in editing. Connect to the SDI output connector of the VTR to be used as player 2.

**❸ AUX (auxiliary)/PLAYER-3 connector (BNC type)**
Inputs video signals for use in editing. Connect to the SDI output connector of a camera or other device, or to the SDI output connector of the VTR to be used as player 3. When connecting a VTR, set the AUX | P3 item in the setup menu (SETUP DATA > SYSTEM CONFIG) to P3. The VTR cannot be controlled from this unit as player 3 unless this item is set to P3.

**❹ RECORDER connector (BNC type)**
Connect to the SDI output connector of the VTR to be used as the recorder. Signals input to this connector can be output to the video monitor connected to the MONITOR OUT connector in the SDI OUTPUT section. This allows you to check the contents of the edit on the main monitor during previews and edit execution.

**❺ TITLE connector (BNC type)**
When you want to superimpose titles, telop images, or illustrations over the edit video, connect the signals to superimpose (SDI format) to this connector.

## 2 SDI OUTPUT section




The connectors in this section output SDI (Serial Digital Interface) format signals. To use these connectors, the optional BKE-701 HD Switcher Board must be installed.

**❶ VIDEO OUT1 (output 1) connector (BNC type)**
Outputs the video edited on the BVE-700 (program output). Connect to the recorder SDI input connector.

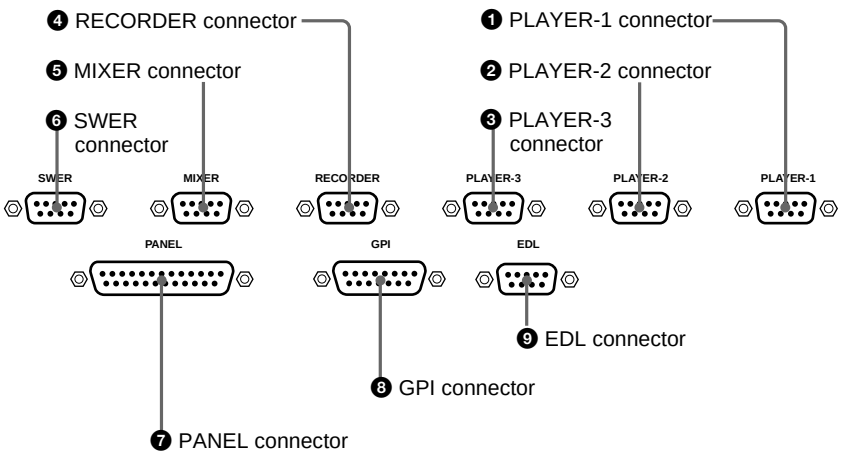
**❷ VIDEO OUT2 (output 2) connector (BNC type)**
Outputs the same signals as the VIDEO OUT1 connector.

**❸ MONITOR OUT (output) connector (BNC type)**
Outputs the video signals selected in the MON OUT section of the control panel. Connect to the SDI input connector of a video monitor. The video monitor connected to this connector functions as the main monitor.

## 3 LAN connector (10BASE-T modular jack)

When installing the BVE-700 software, connect a 10BASE-T cable.

## 4 Control connector section




**❶ PLAYER-1 connector (D-sub, 9-pin)**
Connect to the remote control connector (D-sub, 9-pin) of the VTR to be used as Player 1. This enables the BVE-700 to control the VTR remotely.

**❷ PLAYER-2 connector (D-sub, 9-pin)**
Connect to the remote control connector (D-sub, 9-pin) of the VTR to be used as Player 2. This enables the BVE-700 to control the VTR remotely.

**❸ PLAYER-3 connector (D-sub, 9-pin)**
Connect to the remote control connector (D-sub, 9-pin) of the VTR to be used as Player 3. This enables the BVE-700 to control the VTR remotely.

**❹ RECORDER connector (D-sub, 9-pin)**
Connect to the remote control connector (D-sub, 9-pin) of the VTR to be used as the recorder. This enables the BVE-700 to control the VTR remotely.

**❺ MIXER connector (D-sub, 9-pin)**
When using an audio mixer, connect to the remote control connector (D-sub, 9-pin) of the mixer. This enables the BVE-700 to control the mixer remotely.

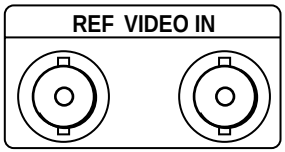
**❻ SWER (switcher) connector (D-sub, 9-pin)**
When using an external video switcher, connect to the remote control connector (D-sub, 9-pin) of the switcher. This enables the BVE-700 to control the switcher remotely.

**❼ PANEL connector (D-sub, 25-pin)**
Connect to the EDITOR connector of the control panel using the supplied BVS cable.

**❽ GPI (General-Purpose Interface) connector (D-sub, 15-pin)**
Outputs start pulses for control of telop cameras, telecine, and other external devices. Connect to the GPI input connector of the external device.

**❾ EDL (Edit Decision List) connector (D-sub, 9-pin)**
This connector is used to transfer EDL data (BVE-9100 format) and BVE-700 setup data between the BVE-700 and external devices.
Connect to the RS-232C connector of the external device.

## 5 REF (reference) VIDEO connectors (BNC type)




Connect an external reference video input signal to one of these connectors. The two connectors form a loop-through connection.

Signals input to one connector are output from the other.

## 6 ⏚ (ground) terminal

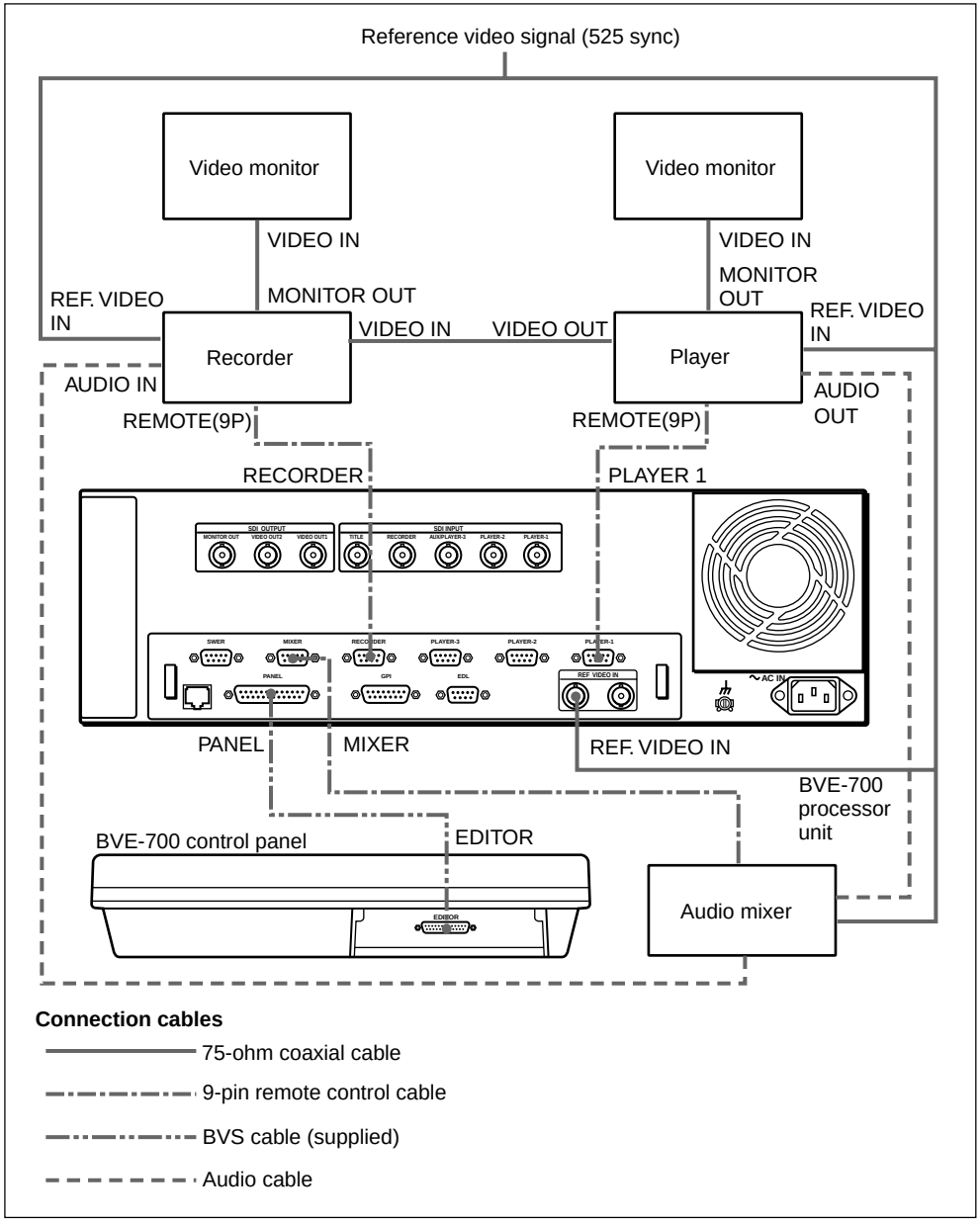
Signal ground connector. Connect as required to the ground connector of a rack, etc.

## 7 ∼AC IN (inlet)

Connect to an AC power outlet using the optional power cord.

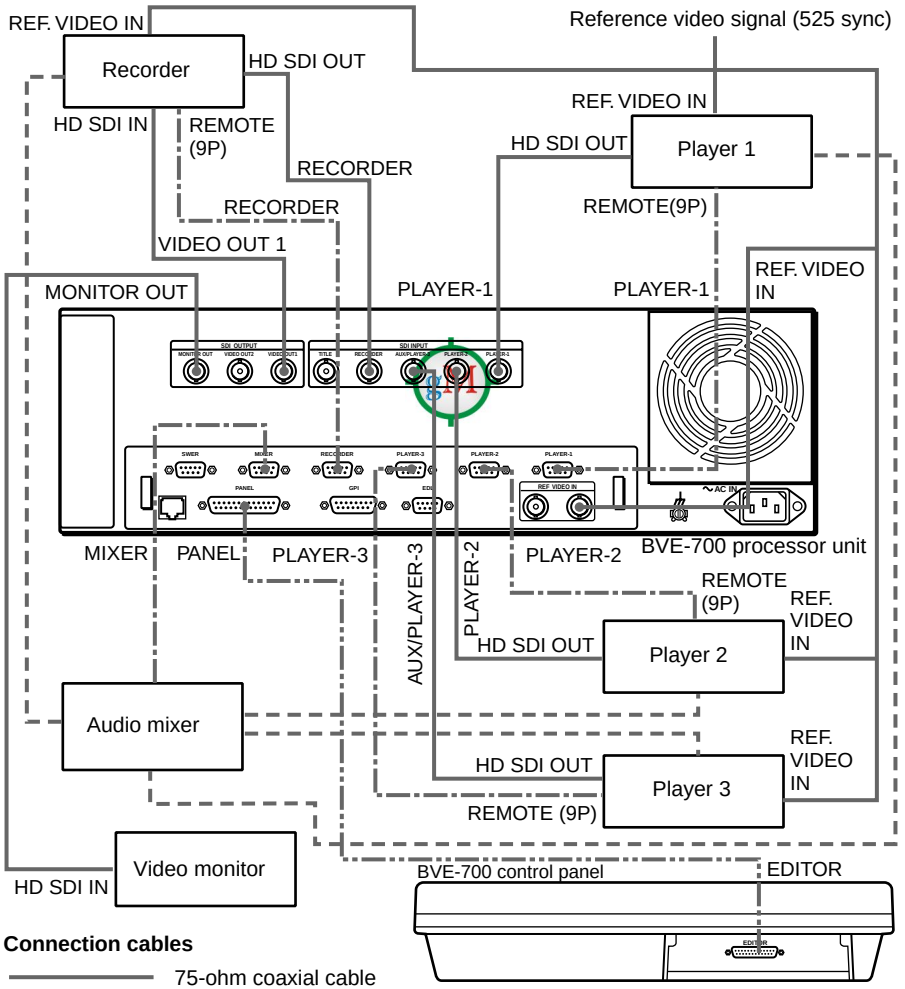
# Connections

## Basic System



## A/B-Roll Editing System

The figure below shows an example of connections for A/B-roll editing system using HDW-500 HD VTRs.




*For details on audio mixer and VTR connections, refer to the audio mixer and VTR operation manuals.*

# Specifications

## BVE-700 Processor Unit and Control Panel

### Edit functions

Edit modes
Insert and assemble editing for video and audio channels 1 to 8

Editing reference
CTL, SMPTE/EBU timecode (LTC)

Edit accuracy
± 0 frames in timecode operation
± 1 frames in CTL operation

Memory capacity
100 edits

Split edit base
Video or audio IN point

Transition time
0 to 59:29 (frame units)

Time counter displays

Timecode mode
00 hours 00 minutes 00 seconds 00 frames to 23 hours 59 minutes 59 seconds 29 frames

CTL mode
00 hours 00 minutes 00 seconds 00 frames to 23 hours to 59 minutes 59 seconds 29 frames (24-hour display); –9 hours 59 minutes 59 seconds 29 frames to 14 hours 00 minutes 00 seconds 00 frames at maximum

### Control systems

VTR interface
9-pin D-sub connector (× 4), RS-422A

Controllable VTRs
Recorder × 1
Player × 3

Connectable VTR
HDW-500, HDW-F500, DNW-A75

Remote control functions
PLAY, STILL, REW, FF, STANDBY OFF, JOG, SHUTTLE, DMC, REC, STOP, EJECT

Rs-232C interface
9-pin D-sub connector (× 1)

GPI
15-pin D-sub connector (× 1)

Mixer interface
9-pin D-sub connector (× 1), ESAM 11

Switcher control
Available when optional BKE-701 HD Switcher Board installed. Cut, wipe, dissolve, title superimposition

## General

Power requirements
100 to 240 V AC, 50/60 Hz
Power consumption
Max. 2.5 A
Peak inrush current
(1) Power ON, current probe method:
36.0A (240V)
(2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 12.8A (230V)
Operating temperature
Operation guaranteed
5°C to 35°C (41°F to 95°F)
Performance guaranteed
10°C to 30°C (50°F to 86°F)
Storage temperature
–20°C to +60°C (–4°F to +140°F)
Dimensions (w/h/d, excluding projections)
Processor unit
440 × 175 × 574 mm (17 3/8 × 7 × 22 5/8 inches)
Control panel
440 × 340 × 93.9 mm (17 3/8 × 13 1/2 × 3 3/4 inches)
Mass
Processor unit
10 kg (22 lb) (main unit only)
14 kg (30 lb 13 oz) (with BKE-701 installed)
Control panel
4 kg (8 lb 8 oz)

## Accessories supplied

BVS cable (1)
Operation Manual (1)
Installation Manual (1)
User's Guide (1)

## Accessories not supplied

AC power cord
For customers in the USA and Canada
Part No. 1-551-812-11
For customers in Europe
Part No. 1-782-929-21

Design and specifications are subject to change without notice.

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